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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/510,038	02/22/2000	Mark M. Meyers	1-8	1549

7590 02/26/2003  
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EXAMINER

ZAHN, JEFFREY N

ART UNIT PAPER NUMBER

2828

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/510,038

Applicant(s)

MEYERS ET AL.

Examiner

Jeffrey N Zahn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

  
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**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 – 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term “positioned” renders the claim indefinite. By what means is the surface positioned, mechanical or chemical? Does “positioned mean the surface has a particular size, shape, angular orientation, directional alignment or location? Does positioned mean the introduction of a special configuration?

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published

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under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

**Claims 1 – 4, 11 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakanishi et al. US 6,236,669 (herein after known as Nakanishi).** In Fig. 8 of Nakanishi he teaches that the prior art included an optical assembly with a silicon substrate 90, a light emitting device 98 mounted to a major surface of the substrate and having a face, a channel 93 formed in the substrate and located near the face of the light emitting device, at least one photodetector is reference numeral 96 which is shown optically coupled to the light emitting device. The channel 93 includes a surface 95 adapted to receive a portion of the face light so that a portion of the face light will be reflected away from the photodetector so that the photodetector will receive primarily direct light from the face. At the bottom of the channel 93 is a V shaped groove. As can be seen in the figure, 1.3 micron light is reflected away from the photodetector, while the 1.55 micron light is directed to the photodetector. Light emitting device 98 is a laser diode. Nakanishi's background discussion talks about bi-directional optical communications, which would inherently have transmitting and receiving portions. Control circuitry, although not shown, is inherent, or the device would not function.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi.** Nakanishi discloses the claimed invention except for the array of photodetectors. It would have been obvious to one having ordinary skill in the art at the time the invention was made to replace the photodetector of Nakanishi with an array of photodetectors, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

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**Claims 5 – 7, 9 and 13 – 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi as applied to claims 1 – 4, 11 and 12 above, further in view of Yoshida et al. US 5,446,719 (herein after known as Yoshida).** The angle at which the face of the groove is cut would depend on the arrangement of the components. In other words, one of ordinary skill would find it obvious to tailor the cut angle of the groove based on need, whether that is to a particular angular alignment or if the reference to a particular crystallographic plane were the alignment method. Also shown in Fig. 3 of Yoshida shows a backface emission for the purpose of power monitoring by a photodetector. This utilization of a backface emission, as illustrated by Yoshida is a well-known technique in the art. Therefore, it would be obvious to one of ordinary skill in the art to modify Nakanishi as taught by Yoshida. The method steps are inherent to the apparatus.

**Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi as applied to claims 1 – 4, 11 and 12 above, and further in view of Tu US 6,219,470 (herein after known as Tu).** Nakanishi teaches the invention as outlined in the rejection above, but fails to teach a substrate with multiple V-grooves. However, Tu teaches this in Fig. 3 of his patent. Therefore, it would be obvious to one of ordinary skill in the art to modify Nakanishi as taught by Tu.

#### ***Response to Arguments***

Applicant's arguments filed 16 December 2002 have been fully considered but they are not persuasive.

Regarding 35 U.S.C. § 112 rejections discussed above, the Applicant has amended the claims to replace "adapted" with "positioned." This amendment does not overcome the indefiniteness rejection discussed in the Office Action of Paper No. 4.

Regarding the 35 U.S.C. § 112 (e) rejections as related to Claims 1-4, 11 and 12 discussed above and by the Applicant. The Applicant's argument is not persuasive because Nakanishi et al. discloses that the LD configuration of Fig. 8 is part of a transmission/reception system. (col. 1, line 25- col. 6, line 15) The transmission end will include a LD as claimed that includes transmission at 1.55um. This transmission will be reflected away from a PD through a WD filter and transmitted along a fiber (92).

It is recommended that the Applicant further defines "positioned" as discussed above to overcome this art rejection. Further structural elements/cooperative relationships would clarify the Applicant's claimed invention.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey N Zahn whose telephone number is 703-305-3443. The examiner can normally be reached on M-F: 8:30-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on 703-308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Jeffrey Zahn  
February 23, 2003



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